Fig. 1

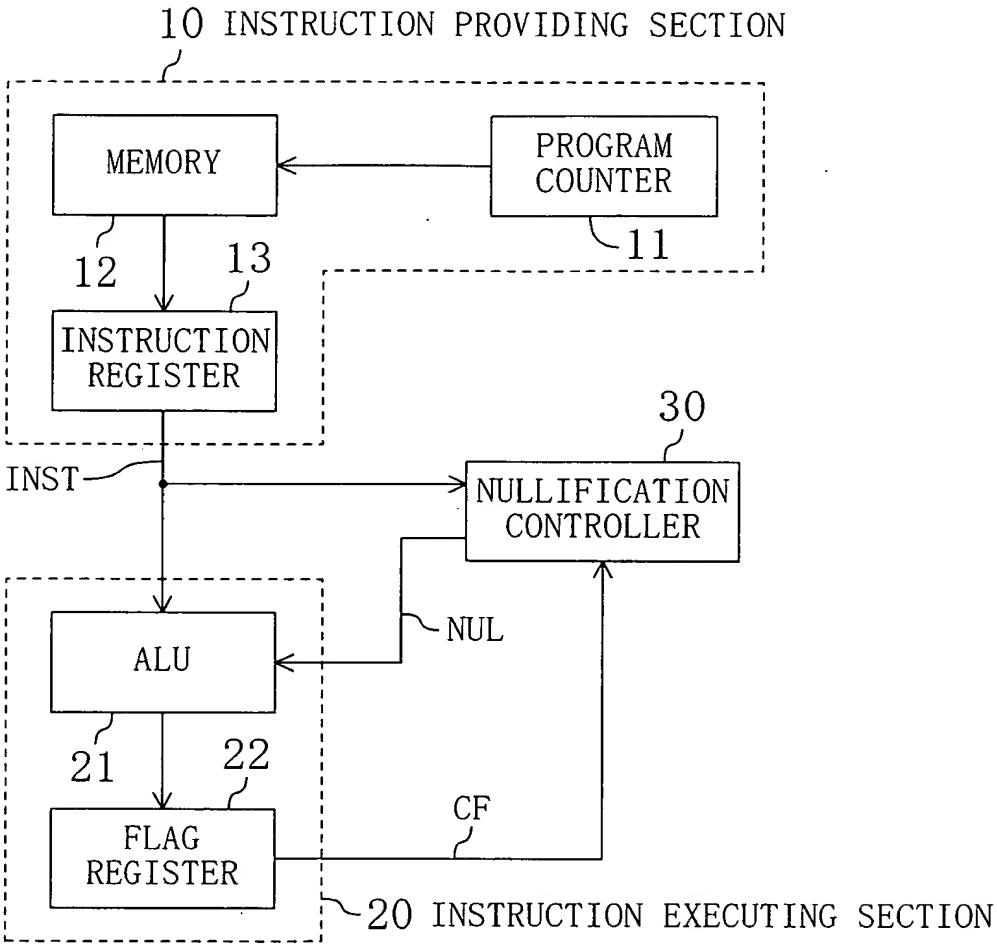
10 INSTRUCTION PROVIDING SECTION
MEMORY
PROGRAM COUNTER
12
13
11
INSTRUCTION REGISTER
30
INST
NULLIFICATION CONTROLLER
NUL
ALU
21
22
CF
FLAG REGISTER
20 INSTRUCTION EXECUTING SECTION

Fig. 2

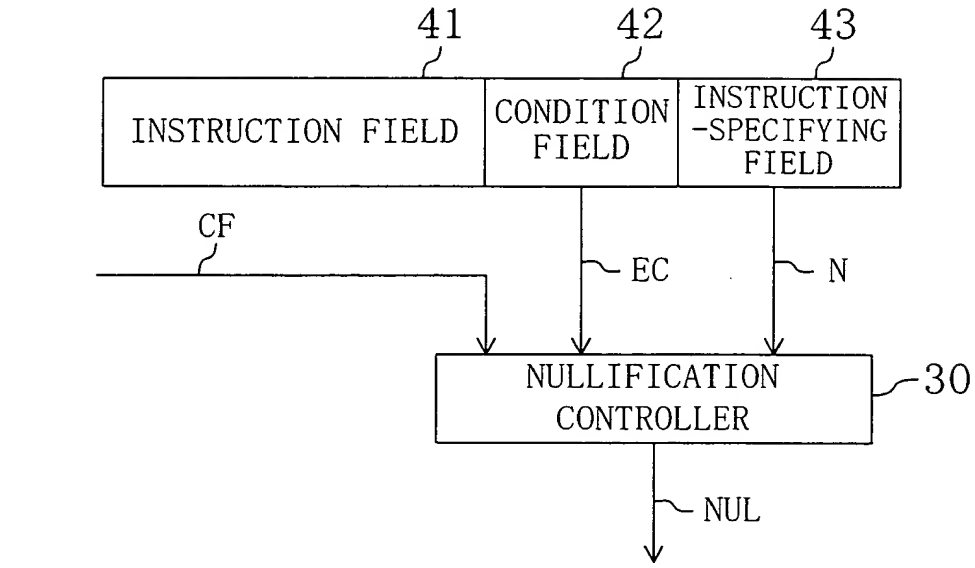
EXECUTION CONTROL INSTRUCTION
41
42
43
INSTRUCTION FIELD
CONDITION FIELD
INSTRUCTION -SPECIFYING FIELD
CF
EC
N
NULLIFICATION CONTROLLER
30
NUL

Fig. 3

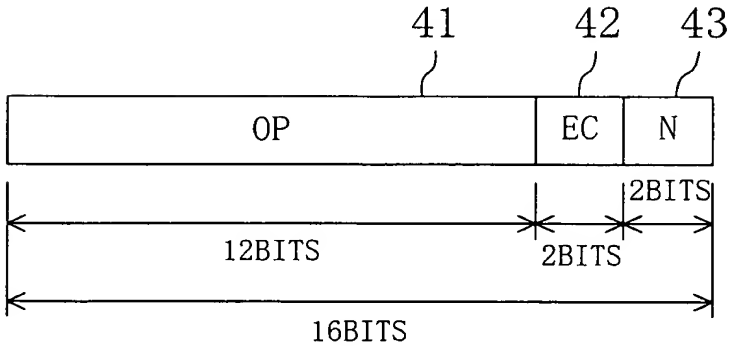
41
42
43
OP
EC
N
2BITS
12BITS
2BITS
16BITS

Fig. 4

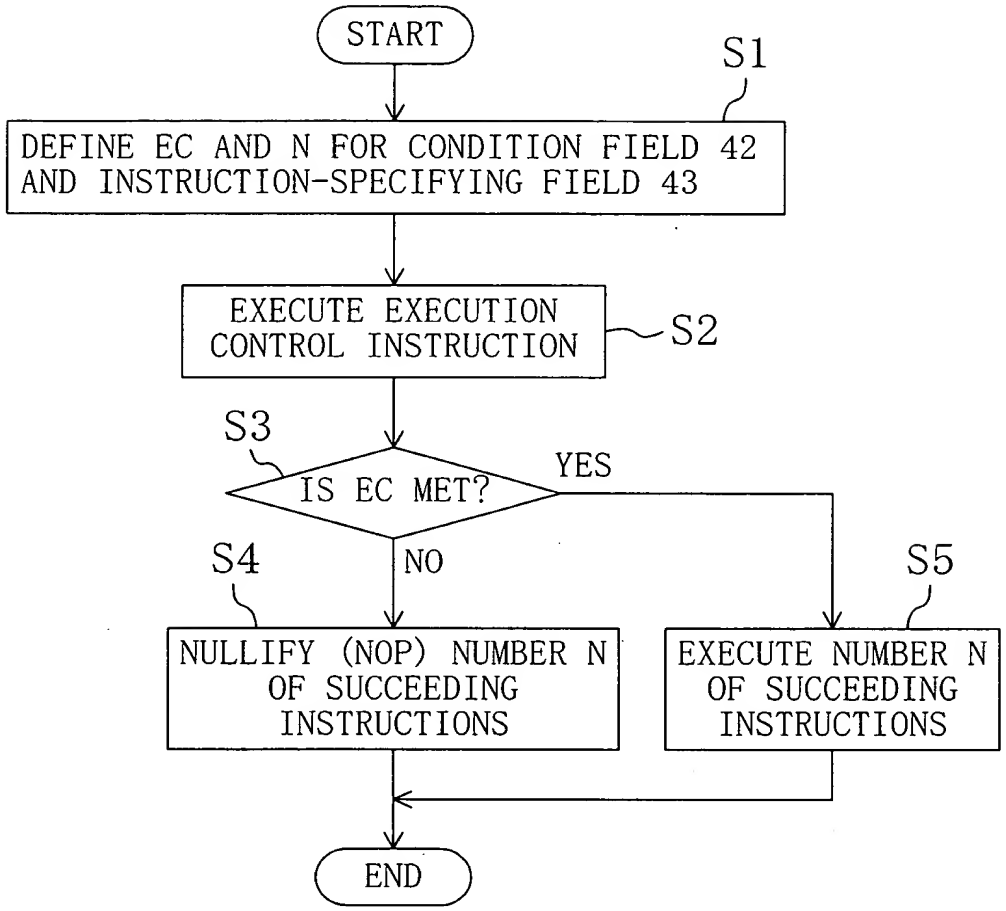
START
S1
DEFINE EC AND N FOR CONDITION FIELD 42
AND INSTRUCTION-SPECIFYING FIELD 43
EXECUTE EXECUTION
CONTROL INSTRUCTION
S2
S3
IS EC MET?
YES
NO
S4
S5
NULLIFY (NOP) NUMBER N
OF SUCCEEDING
INSTRUCTIONS
EXECUTE NUMBER N
OF SUCCEEDING
INSTRUCTIONS
END

Fig. 15

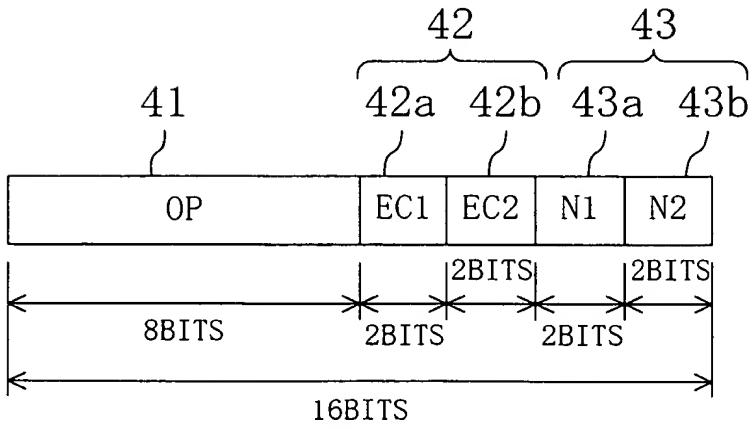
42
43
41
42a
42b
43a
43b
OP
EC1
EC2
N1
N2
2BITS
2BITS
8BITS
2BITS
2BITS
16BITS

Fig. 5A

```
IF EC IS NOT MET (F1=0)
    EXECUTION CONTROL INSTRUCTION F1,4
    NOP
    NOP
    NOP
    NOP
    SUCCEEDING INSTRUCTION 5
```

Fig. 5B

```
IF EC IS MET (F1=1)
    EXECUTION CONTROL INSTRUCTION F1,4
    SUCCEEDING INSTRUCTION 1
    SUCCEEDING INSTRUCTION 2
    SUCCEEDING INSTRUCTION 3
    SUCCEEDING INSTRUCTION 4
    SUCCEEDING INSTRUCTION 5
```

Fig. 6

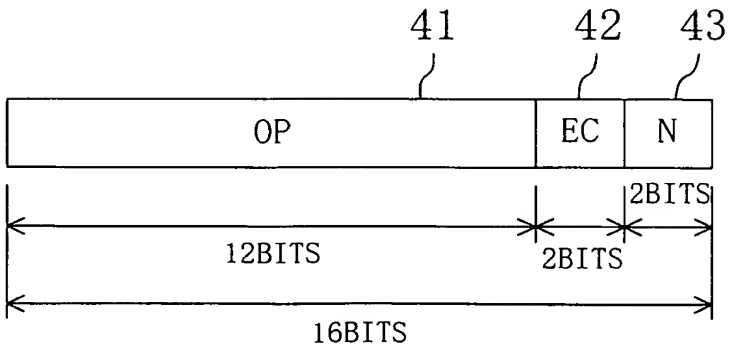

Fig. 7

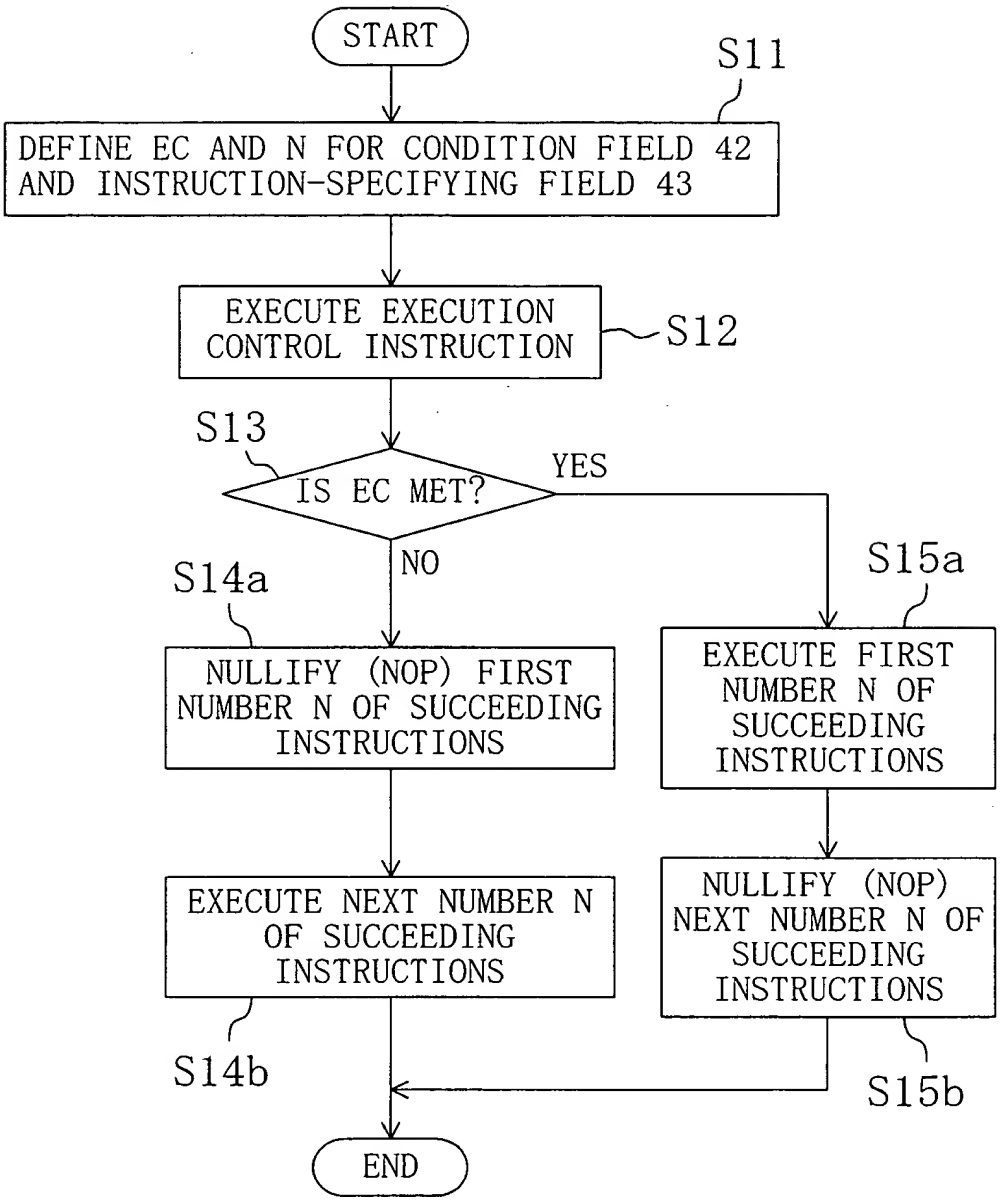
START
S11
DEFINE EC AND N FOR CONDITION FIELD 42 AND INSTRUCTION-SPECIFYING FIELD 43
EXECUTE EXECUTION CONTROL INSTRUCTION
S12
S13
IS EC MET?
YES
NO
S14a
NULLIFY (NOP) FIRST NUMBER N OF SUCCEEDING INSTRUCTIONS
S15a
EXECUTE FIRST NUMBER N OF SUCCEEDING INSTRUCTIONS
EXECUTE NEXT NUMBER N OF SUCCEEDING INSTRUCTIONS
NULLIFY (NOP) NEXT NUMBER N OF SUCCEEDING INSTRUCTIONS
S14b
S15b
END

Fig. 8A

IF EC IS NOT MET (F1=0)

EXECUTION CONTROL INSTRUCTION F1, 2
NOP
NOP
SUCCEEDING INSTRUCTION 3
SUCCEEDING INSTRUCTION 4
SUCCEEDING INSTRUCTION 5

Fig. 8B

IF EC IS MET (F1=1)

EXECUTION CONTROL INSTRUCTION F1, 2
SUCCEEDING INSTRUCTION 1
SUCCEEDING INSTRUCTION 2
NOP
NOP
SUCCEEDING INSTRUCTION 5

Fig. 9

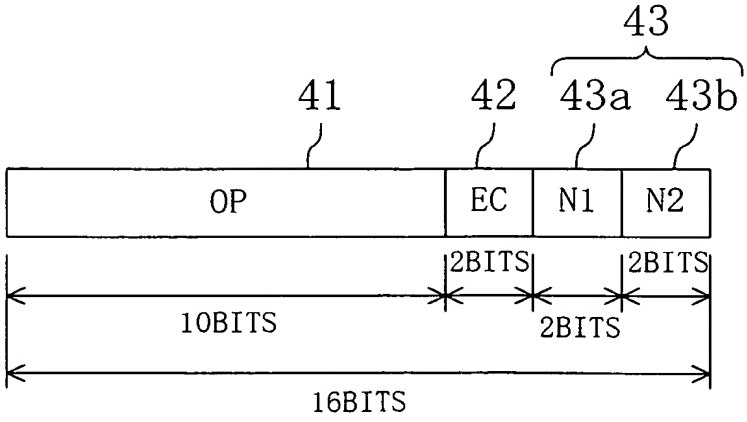

Fig. 10

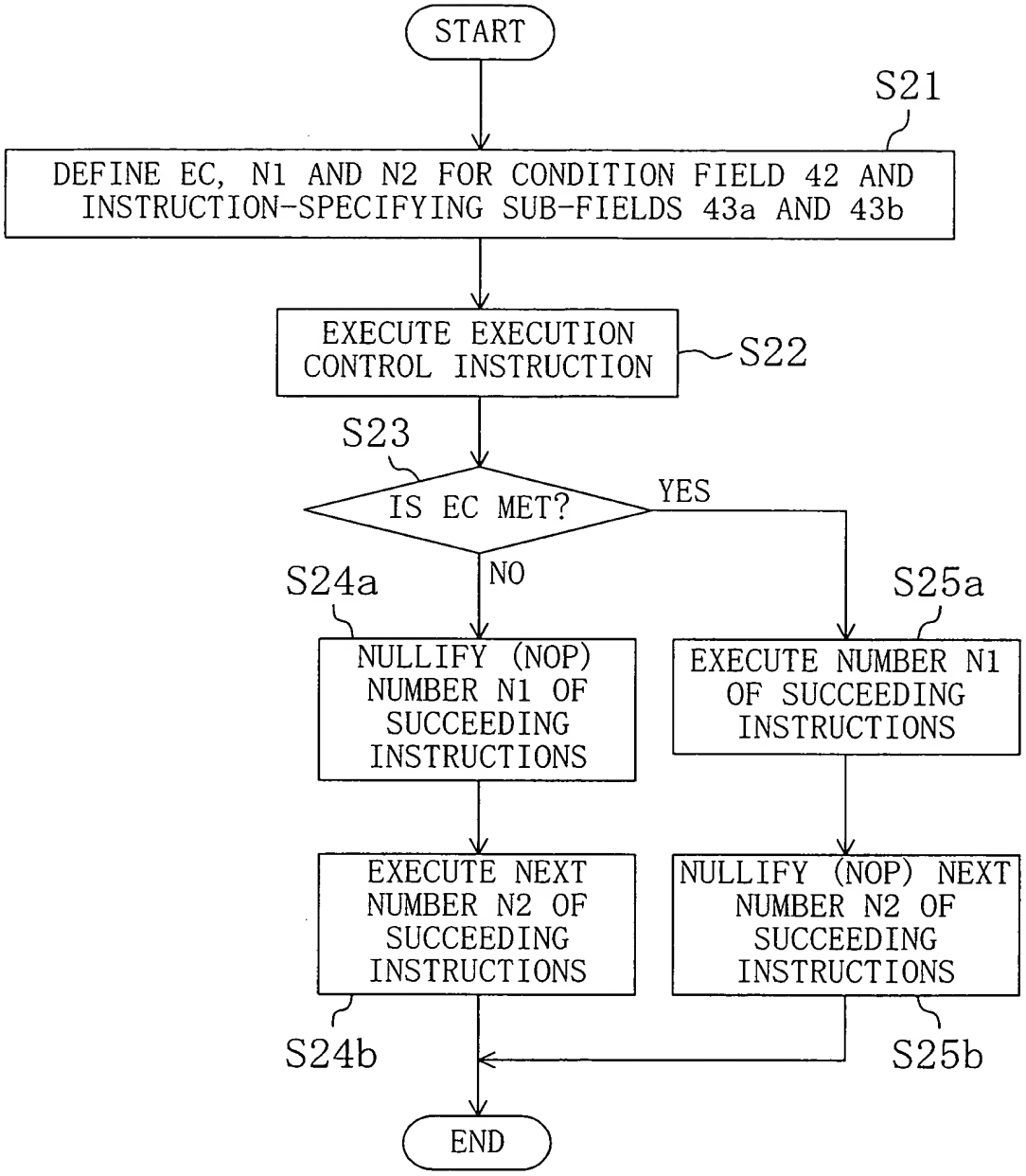
START
S21
DEFINE EC, N1 AND N2 FOR CONDITION FIELD 42 AND INSTRUCTION-SPECIFYING SUB-FIELDS 43a AND 43b
EXECUTE EXECUTION CONTROL INSTRUCTION
S22
S23
IS EC MET?
YES
NO
S24a
S25a
NULLIFY (NOP) NUMBER N1 OF SUCCEEDING INSTRUCTIONS
EXECUTE NUMBER N1 OF SUCCEEDING INSTRUCTIONS
EXECUTE NEXT NUMBER N2 OF SUCCEEDING INSTRUCTIONS
NULLIFY (NOP) NEXT NUMBER N2 OF SUCCEEDING INSTRUCTIONS
S24b
S25b
END

Fig. 11A

IF EC IS NOT MET (F1=0)

EXECUTION CONTROL INSTRUCTION F1, 1, 3
NOP
SUCCEEDING INSTRUCTION 2
SUCCEEDING INSTRUCTION 3
SUCCEEDING INSTRUCTION 4
SUCCEEDING INSTRUCTION 5

Fig. 11B

IF EC IS MET (F1=1)

EXECUTION CONTROL INSTRUCTION F1, 1, 3
SUCCEEDING INSTRUCTION 1
NOP
NOP
NOP
SUCCEEDING INSTRUCTION 5

Fig. 12

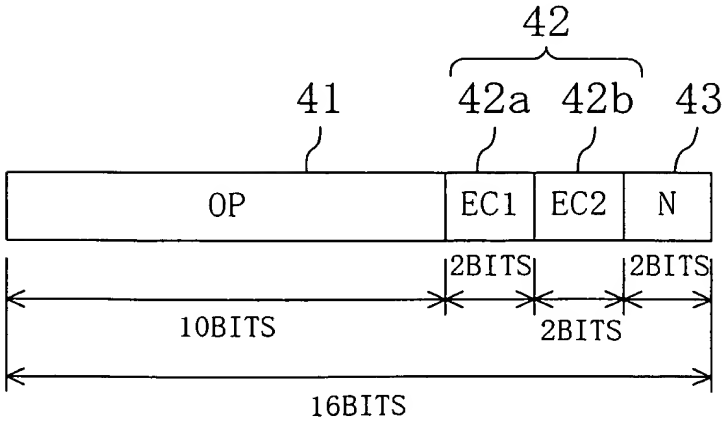

Fig. 13

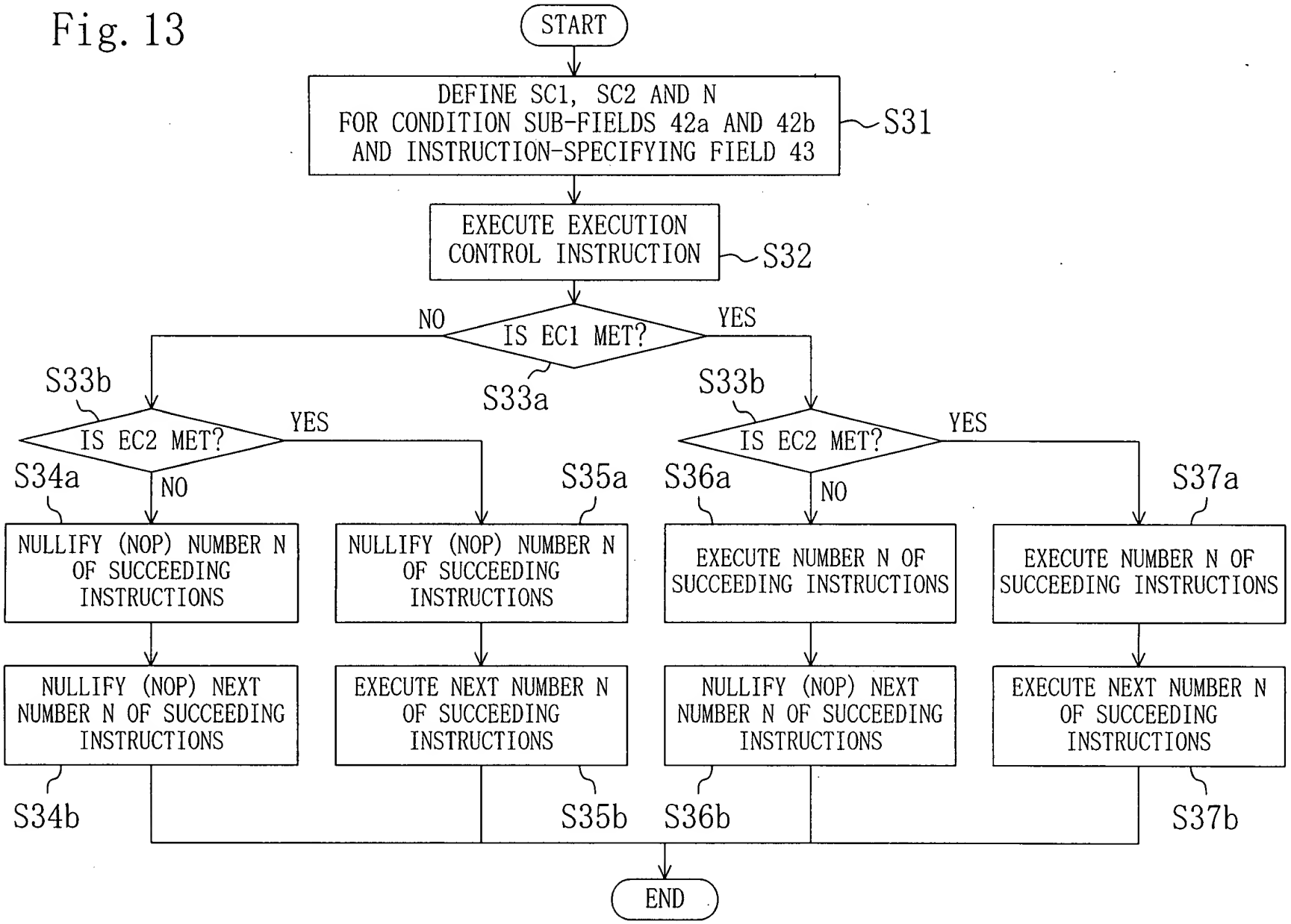
START
DEFINE SC1, SC2 AND N FOR CONDITION SUB-FIELDS 42a AND 42b AND INSTRUCTION-SPECIFYING FIELD 43
S31
EXECUTE EXECUTION CONTROL INSTRUCTION
S32
IS EC1 MET?
NO
YES
S33a
S33b
IS EC2 MET?
YES
NO
S34a
S35a
S36a
S37a
NULLIFY (NOP) NUMBER N OF SUCCEEDING INSTRUCTIONS
EXECUTE NUMBER N OF SUCCEEDING INSTRUCTIONS
NULLIFY (NOP) NEXT NUMBER N OF SUCCEEDING INSTRUCTIONS
EXECUTE NEXT NUMBER N OF SUCCEEDING INSTRUCTIONS
S34b
S35b
S36b
S37b
END

Fig. 14A

IF NEITHER EC1 NOR EC2 IS MET (WHEN F1=0 AND F2=1)

```
EXECUTION CONTROL INSTRUCTION F1,NF2,2
NOP
NOP
NOP
NOP
SUCCEEDING INSTRUCTION 5
```

Fig. 14B

IF EC1 IS NOT MET AND EC2 IS MET (WHEN F1=0 AND F2=0)

```
EXECUTION CONTROL INSTRUCTION F1,NF2,2
NOP
NOP
SUCCEEDING INSTRUCTION 3
SUCCEEDING INSTRUCTION 4
SUCCEEDING INSTRUCTION 5
```

Fig. 14C

IF EC1 IS MET AND EC2 IS NOT MET (WHEN F1=1 AND F2=1)

```
EXECUTION CONTROL INSTRUCTION F1,NF2,2
SUCCEEDING INSTRUCTION 1
SUCCEEDING INSTRUCTION 2
NOP
NOP
SUCCEEDING INSTRUCTION 5
```

Fig. 14D

IF BOTH EC1 AND EC2 ARE MET (WHEN F1=1 AND F2=0)

```
EXECUTION CONTROL INSTRUCTION F1,NF2,2
SUCCEEDING INSTRUCTION 1
SUCCEEDING INSTRUCTION 2
SUCCEEDING INSTRUCTION 3
SUCCEEDING INSTRUCTION 4
SUCCEEDING INSTRUCTION 5
```

Fig. 16

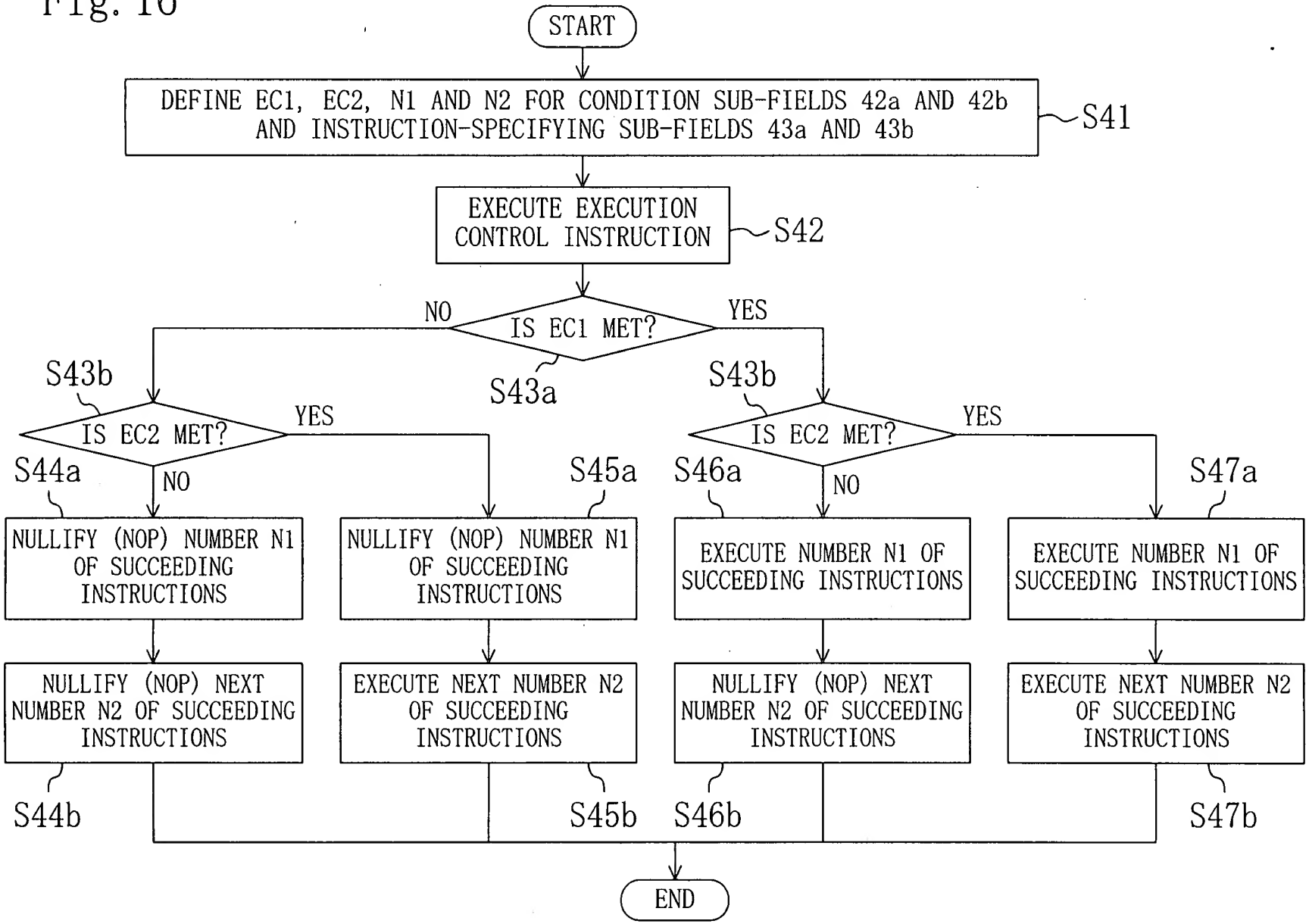
START
DEFINE EC1, EC2, N1 AND N2 FOR CONDITION SUB-FIELDS 42a AND 42b AND INSTRUCTION-SPECIFYING SUB-FIELDS 43a AND 43b
S41
EXECUTE EXECUTION CONTROL INSTRUCTION
S42
IS EC1 MET?
NO
YES
S43a
S43b
IS EC2 MET?
YES
NO
S44a
S45a
S46a
S47a
NULLIFY (NOP) NUMBER N1 OF SUCCEEDING INSTRUCTIONS
EXECUTE NUMBER N1 OF SUCCEEDING INSTRUCTIONS
NULLIFY (NOP) NEXT NUMBER N2 OF SUCCEEDING INSTRUCTIONS
EXECUTE NEXT NUMBER N2 OF SUCCEEDING INSTRUCTIONS
S44b
S45b
S46b
S47b
END

Fig. 17A

```
IF NEITHER EC1 NOR EC2 IS MET (WHEN F1=0 AND F2=1)
        EXECUTION CONTROL INSTRUCTION F1,NF2,1,3
        NOP
        NOP
        NOP
        NOP
        SUCCEEDING INSTRUCTION 5
```

Fig. 17B

```
IF EC1 IS NOT MET AND EC2 IS MET (WHEN F1=0 AND F2=0)
        EXECUTION CONTROL INSTRUCTION F1,NF2,1,3
        NOP
        SUCCEEDING INSTRUCTION 2
        SUCCEEDING INSTRUCTION 3
        SUCCEEDING INSTRUCTION 4
        SUCCEEDING INSTRUCTION 5
```

Fig. 17C

```
IF EC1 IS MET AND EC2 IS NOT MET (WHEN F1=1 AND F2=1)
        EXECUTION CONTROL INSTRUCTION F1,NF2,1,3
        SUCCEEDING INSTRUCTION 1
        NOP
        NOP
        NOP
        SUCCEEDING INSTRUCTION 5
```

Fig. 17D

```
IF BOTH EC1 AND EC2 ARE MET (WHEN F1=1 AND F2=0)
        EXECUTION CONTROL INSTRUCTION F1,NF2,1,3
        SUCCEEDING INSTRUCTION 1
        SUCCEEDING INSTRUCTION 2
        SUCCEEDING INSTRUCTION 3
        SUCCEEDING INSTRUCTION 4
        SUCCEEDING INSTRUCTION 5
```